

# EXHIBIT 12

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1 paper, nor do I have any reason to believe that he  
2 would bias his data in these papers.

3 BY MR. MAIMON:

4 Q. I appreciate that that's your view of  
5 Dr. Edwards, but that wasn't my question.

6 My question is that you didn't verify any  
7 of the data for the biosolids paper, correct?

8 MR. RINGSTAD: Object to form.

9 BY THE WITNESS:

10 A. Well, I don't need to verify the data,  
11 because they're, first of all, as we discussed, peer  
12 reviewed, and the data would have been, I assume, as  
13 we've discussed, Dr. Edwards being a respected author  
14 would have scrutinized and verified these himself. So  
15 we have almost a redundancy of his own work plus a  
16 peer-reviewed process.

17 BY MR. MAIMON:

18 Q. Regardless of whether you believe there  
19 was a need to or not, you did not verify the data,  
20 correct?

21 MR. RINGSTAD: Object to form.

22 BY THE WITNESS:

23 A. Consistent with the Pieper data, I read  
24 the data as they were.

1 BY MR. MAIMON:

2 Q. Is there a difficulty for you in just  
3 acknowledging and admitting that you didn't verify the  
4 data -- any of the data used for this paper?

5 A. I think --

6 MR. RINGSTAD: Object to form.

7 BY THE WITNESS:

8 A. I think there's no difficulty, other than  
9 to say when a researcher reads a peer-reviewed journal  
10 paper, you respect the process, just as we respected  
11 the process before. So just agreeing with you, sir.

12 BY MR. MAIMON:

13 Q. Okay. You did not verify, yourself, any  
14 of their analysis of the data, correct?

15 MR. RINGSTAD: Object to form.

16 BY THE WITNESS:

17 A. Well, as I described in my report, I  
18 reviewed their data quite carefully, in fact, actually  
19 repositioned their paper to try to understand it which  
20 I described carefully in my report.

21 So I would say I scrutinized these data  
22 quite carefully, including the calculations they made.

23 BY MR. MAIMON:

24 Q. All right. You accepted the -- their

1 analysis of the data and the data itself as published  
2 in this peer-reviewed journal, correct?

3 A. Yeah. And as I just said, also  
4 scrutinized the data and the work that they did --

5 Q. Now, they're --

6 A. -- in addition to accepting the  
7 peer-review process.

8 Q. What they are describing here as their  
9 novel hypothesis was that lead measurements in  
10 biosolids from the Flint wastewater treatment plant  
11 represents the lead released from the plumbing to the  
12 Flint water distribution system; is that fair to say?

13 A. That is their -- their hypothesis when  
14 they started their research, yes, and the paper.

15 Q. Okay. Now, you mentioned they had an  
16 article in 2020. I'd mark that as Exhibit 11.

17 (WHEREUPON, a certain document was  
18 marked Graham Gagnon Deposition  
19 Exhibit No. 11, for identification,  
20 as of 02/12/2024.)

21 BY MR. MAIMON:

22 Q. Is this the article that you were  
23 referring to?

24 A. Yes.

Graham Gagnon

1 Q. Okay. And, first of all, do you know  
2 whether or not there is actual data on this, the  
3 estimate of 5 percent -- less than 5 percent of  
4 wastewater deriving from industry?

5 MR. RINGSTAD: Object to form.

6 BY THE WITNESS:

7 A. I know what would be in this e-mail, but  
8 the rest I don't have any data myself and I didn't see  
9 any reported in this paper.

10 BY MR. MAIMON:

11 Q. Okay. But I'm asking you whether you know  
12 whether or not -- aside from Mr. Case saying it, do  
13 you know whether or not there is actual data to -- by  
14 which this can be either verified, investigated, or  
15 confirmed?

16 MR. RINGSTAD: Object to form.

17 BY THE WITNESS:

18 A. You're asking me if there data or is there  
19 a way to investigate this, just to be clear?

20 BY MR. MAIMON:

21 Q. I'm asking you, do you know -- is it your  
22 assumption that there is actual data upon which this  
23 estimate was made?

24 MR. RINGSTAD: Object to form.

1 BY THE WITNESS:

2 A. Yeah, I assume there is -- there is data,  
3 but I did not investigate myself.

4 BY MR. MAIMON:

5 Q. Okay.

6 A. The reason why I say that there would be  
7 data is that oftentimes wastewater treatment plants  
8 have what is called pollution prevention systems in  
9 place that basically go -- particularly at commercial  
10 dischargers, to -- to evaluate them in violation of  
11 any local bylaws for wastewater, which is a very  
12 common practice for industry.

13 So knowing they are commercial or large  
14 wastewater inputters would be, I would say, normal  
15 practice in the United States.

16 MR. MAIMON: Again, I'll move to strike as  
17 nonresponsive.

18 BY MR. MAIMON:

19 Q. If you can take a look at Page 18 of your  
20 report, and I'd like to point you to the final  
21 paragraph on that page.

22 Are you there?

23 A. Yes.

24 Q. You cite from the various sections of the

1 UNITED STATES DISTRICT COURT  
2 EASTERN DISTRICT OF MICHIGAN  
3 SOUTHERN DIVISION  
4

-----)  
5 ) Civil Action No.:  
IN RE: FLINT WATER CASES ) 5:16-cv-10444-JEL-MKM  
6 ) (consolidated)  
7 )  
8 ) Hon. Judith E. Levy  
9 )  
-----)

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9 - - -  
10 REMOTE VIDEOTAPED DEPOSITION OF  
11 GRAHAM GAGNON, PH.D., P.ENG.  
12 Wednesday, February 14, 2024  
13 Volume 2  
14 - - -  
15

16 Continuation of the remote videotaped  
17 deposition of GRAHAM GAGNON, PH.D., P.ENG., commencing  
18 at 11:03 a.m., Wednesday, February 14, 2024, before  
19 Juliana F. Zajicek, Registered Professional Reporter,  
20 Certified Shorthand Reporter and Certified Realtime  
21 Reporter.

22 - - -  
23 GOLKOW LITIGATION SERVICES  
24 877.370.3377 ph | 917.591.5672 fax  
Deps@golkow.com



1     that, would you?

2           A.     No, sir.

3           Q.     Okay. I just want to know from your  
4     perspective from a scientific point of view, is it  
5     scientifically acceptable and reliable to rely on  
6     e-mail information and a personal communication such  
7     as this in order to support a statement and an  
8     assumption in a scientific article?

9           MR. RINGSTAD: Object to form.

10          BY MR. MAIMON:

11          Q.     Do you understand my question?

12          A.     Well, I would say personal communication  
13     is -- is often used for a basis of -- of grounding  
14     information. That is quite normal in scientific  
15     publications.

16          Q.     Okay. And so what you're saying is that  
17     as far as you're concerned, it was perfectly proper  
18     and acceptable for Drs. Roy and Edwards to rely on  
19     this e-mail communication from Mr. Case in order to  
20     support one of the assumptions of their paper, fair?

21          A.     Yeah, I think it's -- it's fair, but  
22     obviously they've cited other literature in and above  
23     -- in and addition to this one noted information  
24     around the reasonableness of looking at biosolids in

1 general and metal specifically in biosolids.

2 So I think this only grounds it specific  
3 to Flint, but certainly aligns with other -- with  
4 other references that they cite in this work.

5 Q. Well, what they're referring to here for  
6 Mr. Case is not only specific to Flint but specific to  
7 the contribution of wastewater from industry to the  
8 waste -- correct?

9 MR. RINGSTAD: Object to form.

10 BY THE WITNESS:

11 A. I mean, I read this as more specific to  
12 Flint.

13 BY MR. MAIMON:

14 Q. Yes. The only citation and reference they  
15 give for this 5 percent number -- or less than  
16 5 percent number with regard to Flint is the e-mail  
17 from Case in 2018, correct?

18 A. Well, they also, then, conduct analyses  
19 to, you know, ground it further, but I think this  
20 is -- as we know in the paper, this is fairly  
21 introductory into the paper to give some basis of  
22 grounding.

23 They then pursue calculations throughout  
24 their -- their work. So this is just a, I would say,

1 a starting point as opposed to an endpoint.

2 Q. And my point, I just want to make sure, is  
3 that from a scientific point of view, the personal  
4 communication in terms of the e-mail is acceptable to  
5 rely upon for purposes of this starting point, fair?

6 MR. RINGSTAD: Object to form.

7 BY THE WITNESS:

8 A. As a starting -- to have a personal  
9 communication, as we talked about, is often relied  
10 upon as a starting point or a grounding point, but  
11 obviously they rely on detailed calculations and  
12 analysis to -- to substantiate their -- their efforts.

13 BY MR. MAIMON:

14 Q. I understand that. Okay.

15 Do you know what records the Flint  
16 wastewater treatment plant keeps as far as how much  
17 wastewater is derived from what source?

18 A. How much wastewater is derived from what  
19 source?

20 Q. Yes.

21 A. Could you explain this a bit more?

22 Q. Sure.

23 The -- in Roy and Edwards here that we  
24 have on the -- on the screen right now, they are

1 asserting that less than 5 percent of the wastewater  
2 is derived from industry.

3 Do you see that?

4 A. I do.

5 Q. Do you know whether or not the Flint Water  
6 Treatment Plant -- Flint Wastewater Treatment Plant  
7 keeps records on that issue?

8 A. I mean, I haven't studied that myself,  
9 so -- but I would say in a normal situation, large  
10 wastewater users -- so having worked at an industrial  
11 facility myself in a separate city, we had to report  
12 on the volumes and we had bylaw controls on what we  
13 were disposing into sewers.

14 So larger industries are very well  
15 reported from an upset standpoint. Individual  
16 households aren't, but large industries that are  
17 putting their sewer into a sewer system is quite -- is  
18 quite normal.

19 But having not studied this specific  
20 question at Flint, my answer would be I would assume  
21 they would be doing this, but I can't -- can't be  
22 sure.

23 Q. Okay. And you -- because you can't be  
24 sure, you don't know whether or not Drs. Roy and/or

1 Edwards reviewed any records of the Flint wastewater  
2 treatment plant to confirm what Mr. Case told them.

3 That's true, isn't it?

4 A. I mean, they both -- both individuals were  
5 on the ground in Flint extensively. I would accept  
6 that they have intimate knowledge of the City -- of  
7 the City of Flint to rationalize this comment. So I  
8 don't think they would be flippant in their analysis  
9 in that regard.

10 Q. Well, I appreciate that -- your views on  
11 them as individuals and as scientists, but the truth  
12 of the matter is, Dr. Gagnon, you just don't know  
13 whether or not they reviewed any records to  
14 corroborate what Mr. Case told them.

15 That's true, isn't it? You don't know?

16 MR. RINGSTAD: Object to form.

17 BY THE WITNESS:

18 A. Well, I -- I do know that they were in  
19 Flint for months --

20 BY MR. MAIMON:

21 Q. Yeah.

22 A. -- prior to 2008 extensively. That, I do  
23 know factually. To the extent that they reviewed  
24 detailed documents for the wastewater plant, I do not

1 know.

2 Q. And based on the statement that less than  
3 5 percent of wastewater is derived from industry, they  
4 conclude or that they say this increases the  
5 likelihood that the lead captured in the biosolids is  
6 mostly derived from domestic plumbing release to  
7 potable water.

8 That's what they say, right?

9 A. Yeah. The emphasis there I would put on  
10 "likelihood," because this is the hypothesis that  
11 they're intending to test. You know, this is the  
12 introduction of their work, and so they're using words  
13 like "likelihood" to emphasize the fact that this is  
14 their hypothesis that they're about to pursue --

15 Q. Fair enough.

16 A. -- which is a normal scientific approach.

17 Q. Fair enough.

18 If this turned out to have not been the  
19 case and a significant amount of wastewater had been  
20 derived from industry, what impact would that have had  
21 on their results?

22 A. Well, they would have obtained different  
23 results, I would -- than what they reported on.

24 Q. Okay. And you don't know what those

1 results would be because the data would be different,  
2 correct?

3 MR. RINGSTAD: Object to form.

4 BY THE WITNESS:

5 A. I have no idea what the different results  
6 would be in a different situation, no.

7 BY MR. MAIMON:

8 Q. Fair enough. Okay.

9 Now, last time we were talking about this  
10 chart in the 2020 article showing the increase in lead  
11 biosolids in 2014 and then the decrease in 2015.

12 Do you recall that?

13 A. I recall that conversation, yes.

14 Q. Okay. And -- okay.

15 And we also mentioned that you were aware  
16 in putting your report together and incorporating this  
17 chart, that VNA started its involvement with regard to  
18 Flint water in or around January of 2015, right?

19 A. I recall that conversation, yes.

20 Q. Have you been given any information from  
21 the lawyers who retained you that is inconsistent with  
22 this notion that there was an increase in lead in  
23 biosolids in 2014 and then a decrease in 2015?

24 MR. RINGSTAD: Objection to form.

1 government who were on the e-mail chain that Mr. Case  
2 had sent telling them about the 5 percent -- less than  
3 5 percent coming from industry.

4 Do you see this e-mail dated October 28th,  
5 2017?

6 A. Yes.

7 Q. And you're aware, aren't you, that the  
8 biosolid data that formed the basis of the Roy and  
9 Edwards paper in 2019 was provided by the City of  
10 Flint and by the wastewater treatment plant, right,  
11 they -- they gave them the data, Roy and Edwards  
12 didn't test the bio -- the sludge themselves, correct?

13 A. Sorry, I was just reading the e-mail.

14 Your question was, did Dr. Edwards measure  
15 the biosolids himself?

16 Q. Yeah, you know that the data from the  
17 biosolids and the lead content of the biosolids was  
18 information that was provided to him by people in  
19 Flint, that he didn't go and test and measure the  
20 sludge himself, right?

21 A. That's my understanding, yes.

22 Q. So let's take a look at this e-mail that  
23 Dr. Edwards sent to Mr. Bincsik and Mr. Krisztian in  
24 October of 2017.



1 MR. RINGSTAD: Object to form, and particularly  
2 the suggestion that Dr. Gagnon is doing anything other  
3 than reading the sentence honestly.

4 You can answer.

5 BY THE WITNESS:

6 A. Well, I think he's very clear on  
7 hypothesis, and I -- when I read hypothesis  
8 statements, it's really, as I said, it's, "this isn't  
9 my idea, this is my research question," and he's  
10 providing some substantiation for his hypothesis,  
11 which I don't object to because this is scientific  
12 pursuit.

13 BY MR. MAIMON:

14 Q. The substantiation is his statement  
15 "because the sludge data that month was higher than  
16 2000 and 2014 August," right? That's the  
17 substantiation you're referring to, right?

18 A. Correct. And as we know, he doesn't  
19 include in this sentence anything about 2011, which he  
20 at great length describes.

21 Q. We'll get to -- we'll get to 2011 in a  
22 minute.

23 But the statement here about the sludge  
24 data for August of '15 being higher than 2000 -- than

1 August of 2013 and August of 2014 is, again,  
2 inconsistent with what was published in 2019 and 2020,  
3 true?

4 MR. RINGSTAD: Object to form.

5 BY THE WITNESS:

6 A. As I said before, work product often  
7 evolves, and this is work product. And the fact that  
8 it evolves is perfectly reasonable, and the fact that  
9 it is slightly different or completely different is  
10 reasonable as scientists pursue their work.

11 BY MR. MAIMON:

12 Q. Have you looked at the underlying sludge  
13 data that Dr. Edwards is referring to here to see  
14 whether or not it actually was as he stated in October  
15 of 2017 or actually was as he published in May  
16 of 2019?

17 A. In the Figure S1 of the supplemental of  
18 the 2020 article provides the date from January 10th  
19 to January 19th month by month, so the answer would be  
20 yes.

21 Q. I asked -- I'm not talking about Dr. --  
22 Dr. -- the publications. I'm talking about the  
23 underlying data itself, the same data that he was  
24 looking at in October of 2017.

1 I'm not talking about what he reported  
2 about it, I'm talking about, have you looked at the  
3 actual data itself?

4 A. I believe I answered the question.

5 Figure S1 provides the data explicitly in  
6 a graphical form, but it's right before our eyes.

7 Q. Who put Figure 1 together?

8 A. Figure S1, sir.

9 Q. Yes, Figure S1, who put it together?

10 A. The authors. I believe it would be Roy  
11 and Edwards.

12 Q. Right. So they looked at the underlying  
13 data and then put that graph together, right?

14 A. I would assume so, yes.

15 Q. My question, sir, is, have you looked at  
16 the underlying data the same way that Dr. -- that  
17 Dr. Edwards in this October of 2017 e-mail was looking  
18 at that data? Have you looked at the same data as he  
19 did?

20 I'm not talking about what the chart that  
21 he put together on it was, but the actual data, have  
22 you looked at that?

23 MR. RINGSTAD: Object to form.

24 BY THE WITNESS:

1           A.     Well, I looked at the chart which is a  
2     representation of the data explicitly, so that's what  
3     I've reviewed.

4     BY MR. MAIMON:

5           Q.     Okay. So the honest answer to my question  
6     is you have not looked at the underlying data, true?

7           MR. RINGSTAD: Object to form.

8     BY THE WITNESS:

9           A.     True in the sense that I don't have the  
10    raw data itself, but it's --

11    BY MR. MAIMON:

12          Q.     Thanks.

13          A.     -- it's lead kilograms in this -- by month  
14    explicitly in this figure.

15          Q.     Thank you. I appreciate your honesty.  
16    Okay.

17          MR. RINGSTAD: Object to form. Move to strike  
18    the commentary.

19    BY MR. MAIMON:

20          Q.     Let's talk a little bit more about the  
21    assumptions underlying the novel hypothesis by Roy and  
22    Edwards.

23                         (WHEREUPON, certain documents were  
24                         marked Graham Gagnon Deposition

1 don't have this in front of me right now.

2 Q. Okay. What if the percentage of  
3 wastewater flow to Flint from Burton were greater,  
4 what impact would that have?

5 A. I mean, I think you would have to also  
6 look at the lead service lines in Burton and lead  
7 contributions in Burton to -- to know that impact on  
8 lead. But as I said, I don't -- I -- my understanding  
9 from reading this report, that it was -- at that time  
10 was that Burton was not a significant contributor.

11 Q. Right. You put it at 1 percent, right?

12 A. Yes, sir.

13 Q. And if it were greater than 1 percent, you  
14 don't have enough data to or information to give an  
15 opinion with reasonable scientific certainty as to  
16 what impact that might have on the results reported by  
17 Roy and Edwards, fair?

18 MR. RINGSTAD: Object to form.

19 BY THE WITNESS:

20 A. What we do know is when Roy and Edwards  
21 performed their model to correlate water lead levels  
22 in biosolids, they describe how the intercept relates  
23 to other sources. So presumably this intercept or  
24 error capture would be moved one way or another,

1 depending on Burton's contribution.

2 BY MR. MAIMON:

3 Q. What if Burton was contributing 15 percent  
4 of the influent to the wastewater treatment plant,  
5 could you say how that would impact the results?

6 A. I can't say sitting here today, but I can  
7 say it would have shown in error form that's described  
8 in the paper.

9 Q. What if it were 30 percent, could you say?

10 A. Again, it would be the same answer.

11 Q. What if two-thirds of the total flow was  
12 from another community, can you say how that would  
13 have impacted the results that Roy and Edwards  
14 reported having assumed that the contribution from  
15 sources other than Flint were small or constant?

16 MR. RINGSTAD: Object to form.

17 BY THE WITNESS:

18 A. Knowing the population of the neighboring  
19 communities, I'm not sure if it would be reasonable to  
20 assume that two-thirds of the wastewater flow would be  
21 coming from somewhere else. So it's really kind of a  
22 difficult question to answer.

23 BY MR. MAIMON:

24 Q. Okay. Have you been given any information

1 total flow from the other community?"

2 Do you see that?

3 A. I do.

4 Q. And that would be important because if  
5 you're talking about whether or not that percentage  
6 was small, as we saw in the assumptions, this is a  
7 perfectly appropriate question for Dr. Edwards to be  
8 asking.

9 Would you agree?

10 A. Yeah.

11 Q. Mr. Bincsik back at 3:41 p.m., 20 minutes  
12 later:

13 "Highly dependent on dry versus wet  
14 weather flows."

15 Right? Do you see that?

16 A. I do.

17 Q. So Dr. Edwards had asked him about the  
18 percentage of total flow from the other community, and  
19 Mr. Bincsik tells him that that is highly dependent on  
20 whether it's dry or wet weather.

21 Do you see that?

22 A. He doesn't say whether it's for Flint or  
23 the other community. He just says, highly dependent  
24 on dry or wet weather flows.

1                   Who knows whether he's referring to Flint  
2                   or to another community. He's not explicitly saying  
3                   one or another because obviously --

4               Q.     Let's take a look at the question. The  
5                   question is: "Any idea of the percentage of total  
6                   flow from the other community?"

7                   Do you see that?

8               A.     I read that, yes.

9               Q.     The answer is: "Highly dependent on dry  
10                  versus wet weather flows."

11                  Do you see that?

12              A.     But he doesn't explicitly say high or wet  
13                  weather flows for another community or for Flint. He  
14                  just says high or wet weather flows. Presumably these  
15                  cities are -- towns are close, which they are. So  
16                  rain doesn't isolate over Flint and then isolate over  
17                  Burton or any other community.

18                  So this would be highly dependent or -- on  
19                  wet or dry anywhere in this region, which would be  
20                  true.

21              MR. MAIMON: I'm going to move to strike as  
22                  nonresponsive.

23              BY MR. MAIMON:

24              Q.     Dr. Edwards at 3:21 p.m. on October 27th,



1 treatment plant independent of these -- of where rain  
2 is landing.

3 MR. MAIMON: I'll move to strike everything  
4 after "let's not split" -- "we're not splitting hairs"  
5 as nonresponsive.

6 BY MR. MAIMON:

7 Q. Would you agree with me that 50 million  
8 gallons per day is two-thirds of a maximum flow  
9 capacity of 70 million -- 75 million gallons per day?

10 MR. RINGSTAD: Object to form.

11 BY THE WITNESS:

12 A. 50 -- 50 million -- 50 divided by 75 is  
13 two-thirds.

14 BY MR. MAIMON:

15 Q. Okay. The -- the information that  
16 Mr. Bincsik provided to Dr. Edwards in October of 2017  
17 in response to his inquiries, that does not appear  
18 anywhere in the printed article which we've marked as  
19 Exhibit 10, as far as you know, correct?

20 MR. RINGSTAD: Object to form.

21 BY THE WITNESS:

22 A. This -- this e-mail exchange is not  
23 explicitly cited to the best of my knowledge or  
24 appears in the article in some kind of form, like a

1 supplemental document.

2 BY MR. MAIMON:

3 Q. And the information conveyed in it by --  
4 that Mr. Bincsik gave to Dr. Edwards is not  
5 information that was contained in the article as well,  
6 correct?

7 MR. RINGSTAD: Object to form.

8 BY THE WITNESS:

9 A. I think all that Dr. Bincsik said is that  
10 the wastewater treatment plant changes inflow rate  
11 when it's dry and wet.

12 MR. MAIMON: Move to strike as nonresponsive.

13 BY MR. MAIMON:

14 Q. Do you have the Roy 2019 article with you?  
15 It was Exhibit 10.

16 A. Yes.

17 Q. Okay. I'd like to ask you some questions  
18 about it.

19 On Page 477 of the printed article -- if  
20 we go to Page 477 of the printed article, on the  
21 right-hand column, the last full paragraph says:

22 "The monthly lead in biosolids was not  
23 correlated with monthly average temperature pre and  
24 post FWC."

1 with all of the support and citations that you give  
2 for it, that the lead in the drinking water in Flint  
3 was primarily from particulate lead, right?

4 A. I describe that in my report, yes.

5 Q. What if the -- that the lead leached on  
6 average from each Flint lead service line were  
7 approximately 36 grams as opposed to 18 grams, how  
8 would that impact the validity of -- of the Roy and  
9 Edwards results that they discuss here in this  
10 paragraph?

11 MR. RINGSTAD: Object to form.

12 BY THE WITNESS:

13 A. You are asking me a hypothetical that  
14 they're not writing about, and I don't know how to  
15 answer that.

16 BY MR. MAIMON:

17 Q. Well, take a look. They are writing about  
18 it.

19 They say that Olson found approximately  
20 18 grams of lead leached on average from each Flint  
21 lead service line.

22 Do you see that?

23 A. I do.

24 Q. And they say that:

1           A.     And my answer was they didn't -- they  
2     didn't put 36.

3           Q.     What?

4           A.     They didn't put 36.

5           Q.     No, I understand that they didn't. I'm  
6     asking you, if it was 36 instead of 18, that would  
7     mean that the projection was double what they actually  
8     found in the biosolids, right?

9           MR. RINGSTAD: Object to form.

10          BY THE WITNESS:

11          A.     But they didn't write 36. They wrote 18.

12          BY MR. MAIMON:

13          Q.     I know that.

14                   I'm asking you if it was 36, it would not  
15     be of similar magnitude to what they measured in the  
16     biosolids, right?

17          A.     I don't know how to answer this situation.  
18     You're presuming a hypothetical that I don't -- is not  
19     written here, sir.

20          Q.     Yes.

21          A.     So I don't understand how to right -- how  
22     to answer this.

23          Q.     I'm asking you to assume -- I'm asking you  
24     to assume that instead of 18 grams of lead leached on

1 A. I see this.

2 Q. Okay. It says:

3 "As long as the unidentified source of  
4 these higher biosolids did not contain a significant  
5 mass of lead, the correlation between lead and  
6 biosolids and the lead release to potable water would  
7 still be valid, as appears to be the case for data  
8 presented."

9 Did I read that correctly?

10 A. Yes. I read that, yes.

11 Q. Because what they were talking about in  
12 that paragraph were possible confounding factors.

13 Do you see that in the beginning of the  
14 paragraph?

15 A. That's right.

16 Q. Okay. And they say as long as the  
17 unidentified source of these higher biosolids did not  
18 contain a significant mass of lead, then the -- the  
19 results that they got would still be valid, right?

20 A. They were talking specifically -- the  
21 sentence before was really what they were trying to  
22 draw, is the impact of the switch in May to July 2014.

23 Q. What if the source of the higher biosolids  
24 actually did contain a significant mass of lead? How

1 would that have impacted the results here, if you  
2 know?

3 MR. RINGSTAD: Object to form.

4 BY THE WITNESS:

5 A. Yeah, I can't answer that question. I  
6 don't know how to.

7 BY MR. MAIMON:

8 Q. Okay. Go to the next page, Page 479.  
9 Are you there?

10 A. Which -- which paragraph on 479?

11 Q. Section 3.4 at the bottom right.

12 A. Yes.

13 Q. They say:

14 "If it is assumed that net biosolids lead  
15 minus the baseline 1.79 kilograms of non-plumbing lead  
16 reflects the true trend in water release -- water lead  
17 release and exposure," and then they go on.

18 Do you see that?

19 A. I do.

20 Q. What is a baseline?

21 A. I would say typically a baseline refers  
22 to, you know, a reference point or a -- of some sort  
23 where they -- yeah, I would say a reference point,  
24 broadly speaking.

1           A.     I mean, that's -- this is what they  
2     reported, so, like, I don't -- I mean, that -- they  
3     reported 1.79.

4     BY MR. MAIMON:

5           Q.     Right. But what if the baseline was  
6     actually higher than they reported, how would that  
7     impact -- and if you don't know how it would have  
8     impacted the results, you can tell me, but how would  
9     it have impacted the results?

10          MR. RINGSTAD: Object to the form.

11     BY THE WITNESS:

12          A.     I mean, you're putting a hypothetical that  
13     I wouldn't know how to possibly answer.

14     BY MR. MAIMON:

15          Q.     Okay. Fair enough.

16                   Do you see in the first full paragraph in  
17     that same column, after Virginia Tech's drinking water  
18     advisory in August 2015?

19          A.     Yes.

20          Q.     It talks about decisive public health  
21     interventions implemented to protect the public from  
22     high water -- water lead levels?

23          A.     Yes, I see this.

24          Q.     Okay. Then the next sentence is what I'd

1                   What had the mean been before it decreased  
2   to 3.12 percent over that following year?

3           A.     Well, of course, the mean is -- is an  
4   average of multiple points. And so there was one  
5   point that is -- is sort of driving that mean up in  
6   2015, and now I'm saying there's two points that are  
7   exceeding the EBL5 to 5 percent.

8                   So the -- the mean of the lower, one could  
9   look at those two particular months and be more  
10   interested in those two months because they're  
11   exceeding guidelines.

12          Q.     That may be so. My question, however, is  
13   they state that the mean percentage EBL5 decreased to  
14   3.12 percent over the following year of November '15  
15   to October '16.

16                   That's what they say, right?

17          A.     That's what they write, yes.

18          Q.     Do you dispute that the data supports that  
19   statement about the mean?

20          A.     No, I don't dispute that their calculated  
21   mean would be that observation. I'm sure they did  
22   their calculations properly.

23          Q.     And my question to you is, can you tell me  
24   as you sit here today, what the mean had been before



1 it decreased to 3.12 percent over that period of time?

2 A. I don't know what the previous mean is  
3 because they don't state it.

4 Q. Okay.

5 A. They state the raw data in figure one as  
6 we've talked about.

7 Q. Okay. Okay. Thank you.

8 MR. MAIMON: Let's take a break. Ten minutes.

9 MR. RINGSTAD: We can go off the record. Thank  
10 you.

11 THE VIDEOGRAPHER: We are off the record at  
12 12:52 p.m.

13 (WHEREUPON, a recess was had  
14 from 12:52 to 1:15 p.m.)

15 THE VIDEOGRAPHER: We are back on the record at  
16 1:15 p.m.

17 BY MR. MAIMON:

18 Q. Okay. Dr. Gagnon, I'd like to go back to  
19 the Roy and Edwards 2019 paper.

20 Do you see on the screen here, it gives  
21 the dates in which it was received by the journal,  
22 received in revised form, accepted for publication,  
23 and then available online.

24 Do you see that?

1 manuscript -- after submitting it, he says:

2 "The manuscript has not been published and  
3 is not under consideration for publication elsewhere."

4 Do you see that?

5 A. I do see that.

6 Q. Now, do you know why Environmental Science  
7 & Technology Letters did not publish this as submitted  
8 by Drs. Roy and Edwards?

9 A. I do not know, but I am curious as to why  
10 this letter is a markup, or this seems to have markups  
11 in it.

12 Q. Well, you can ask somebody else who knows,  
13 because I don't.

14 A. Okay. Thank you.

15 Q. You see also here that they are suggesting  
16 not only who they believe should be peer reviewers but  
17 also who they believe should not be peer reviewers?

18 A. They highlight Dr. Shawn McElmurry,  
19 Dr. Sammy Zahran not to serve as reviewers.

20 Is that what you're referring to?

21 Q. Yes. And then they say -- and I didn't  
22 put it in, but at the final sentence:

23 "If you feel that the manuscript is  
24 appropriate for your journal, we suggest the following

1 reviewers," and they give four names that are in the  
2 letter.

3 A. Yeah.

4 Q. Okay. So, and you don't know, again, why  
5 this was not accepted for publication after it was  
6 submitted in July 21, 2018?

7 A. No, and I do not know if those reviewers  
8 would have been used or not used. As I said, this  
9 would be the editor's discretion --

10 Q. Understood.

11 A. -- to rely on these reviewers or not rely  
12 on these reviewers. This would be up to Professor  
13 Logan to make his decision on who would review.

14 Q. Right. And you don't -- again, you  
15 don't -- you don't know what happened that it was --  
16 that it was not published by Environmental Science &  
17 Technology Letters and what differences it had by the  
18 time it was submitted a few months later to Water  
19 Research where it was ultimately published, correct?  
20 You just don't know?

21 A. I would have no idea, no.

22 Q. I would like to move on to another  
23 subject, but I would like to see if we can agree on  
24 the following.